THE CLAIMS

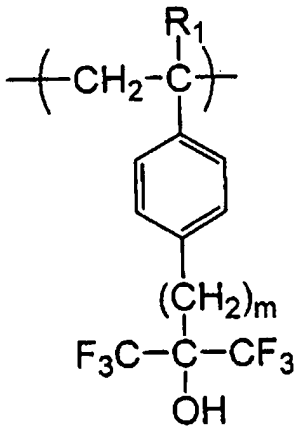
A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

Claim 1 (withdrawn): A pattern formation material comprising:

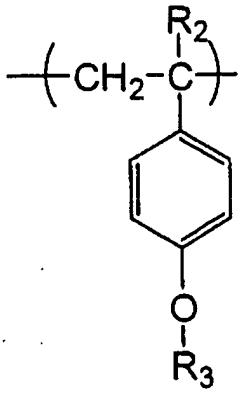
a polymer including a first unit represented by Chemical Formula 1 and a second unit represented by Chemical Formula 2; and

an acid generator:

Chemical Formula 1:



Chemical Formula 2:



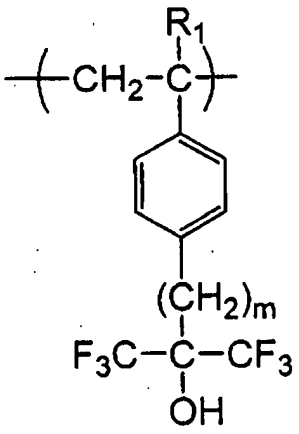
wherein R_1 and R_2 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 is a protecting group released by an acid; and m is an integer of 0 through 5.

Claim 2 (withdrawn): A pattern formation material comprising:

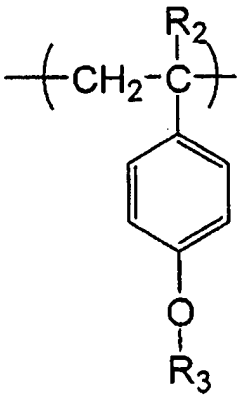
a polymer including a first unit represented by Chemical Formula 3, a second unit represented by Chemical Formula 4 and a third unit represented by Chemical Formula 5; and

an acid generator:

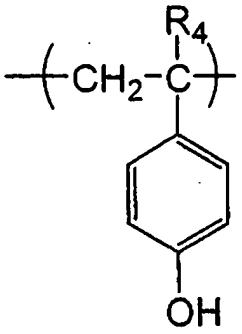
Chemical Formula 3:



Chemical Formula 4:



Chemical Formula 5:



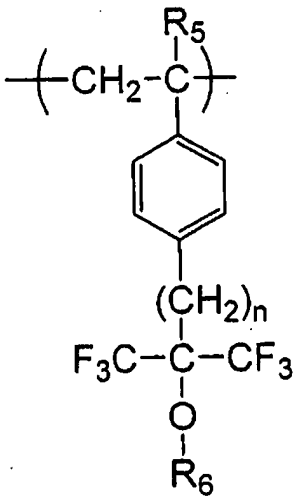
wherein R_1, R_2 and R_4 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 is a protecting group released by an acid; and m is an integer of 0 through 5.

Claim 3 (withdrawn): A pattern formation material comprising:

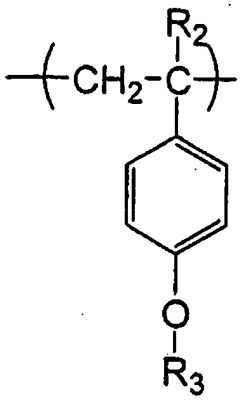
a polymer including a first unit represented by Chemical Formula 6 and a second unit represented by Chemical Formula 7; and

an acid generator:

Chemical Formula 6:



Chemical Formula 7:



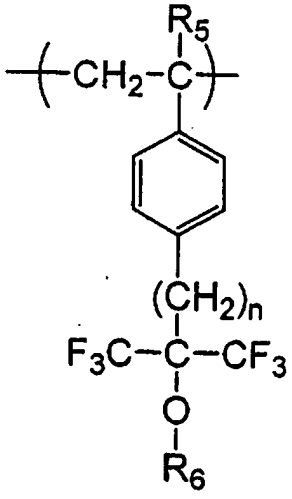
wherein R_2 and R_5 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 and R_6 are the same or different, at least one of which is a protecting group released by an acid; and n is an integer of 0 through 5.

Claim 4 (withdrawn): A pattern formation material comprising:

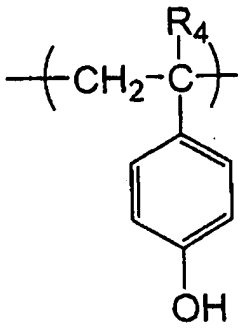
a polymer including a first unit represented by Chemical Formula 8 and a second unit represented by Chemical Formula 9; and

an acid generator:

Chemical Formula 8:



Chemical Formula 9:



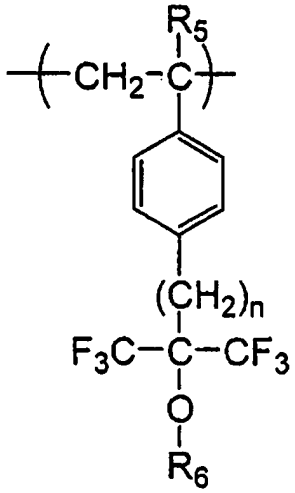
wherein R_4 and R_5 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_6 is a protecting group released by an acid; and n is an integer of 0 through 5.

Claim 5 (withdrawn): A pattern formation material comprising:

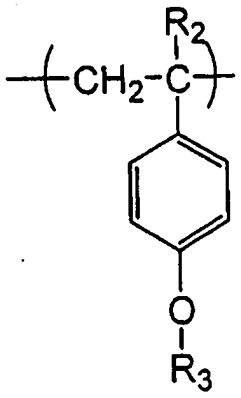
a polymer including a first unit represented by Chemical Formula 10, a second unit represented by Chemical Formula 11 and a third unit represented by Chemical Formula 12; and

an acid generator:

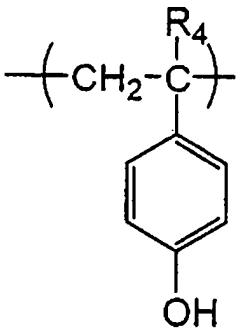
Chemical Formula 10:



Chemical Formula 11:



Chemical Formula 12:

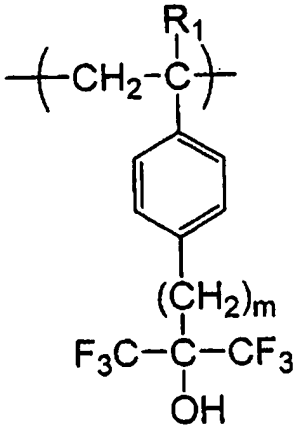


wherein R_2, R_4 and R_5 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 and R_6 are the same or different, at least one of which is a protecting group released by an acid; and n is an integer of 0 through 5.

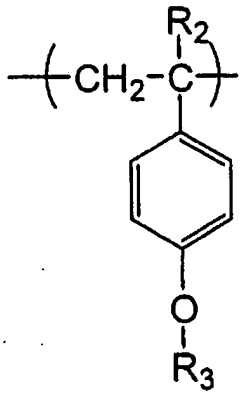
Claim 6 (original): A pattern formation method comprising the steps of:

forming a resist film by applying, on a substrate, a pattern formation material containing a polymer including a first unit represented by Chemical Formula 1 and a second unit represented by Chemical Formula 2, and an acid generator:

Chemical Formula 1:



Chemical Formula 2:



wherein R_1 and R_2 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 is a protecting group released by an acid; and m is an integer of 0 through 5;

irradiating said resist film with exposing light of a wavelength shorter than a 180 nm band for pattern exposure; and

forming a resist pattern by developing said resist film after the pattern exposure.

Claim 7 (original): The pattern formation method of Claim 6, wherein said exposing light is a Xe_2 laser beam, a F_2 laser beam, a Kr_2 laser beam, an ArKr laser beam or an Ar_2 laser beam.

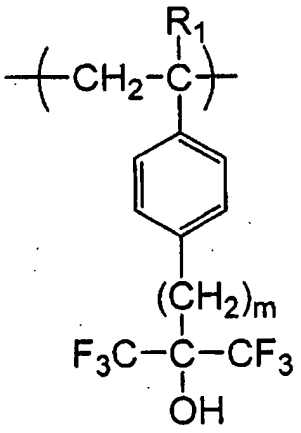
Claim 8 (original): The pattern formation method of Claim 6, wherein said exposing light is soft-X rays.

Claim 9 (original): The pattern formation method of Claim 6, wherein said exposing light is hard-X rays.

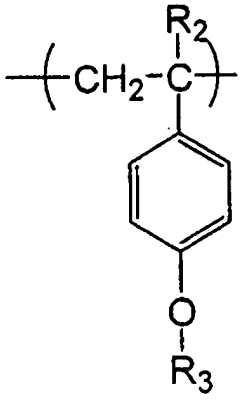
Claim 10 (original): A pattern formation method comprising the steps of:

forming a resist film by applying, on a substrate, a pattern formation material containing a polymer including a first unit represented by Chemical Formula 3, a second unit represented by Chemical Formula 4 and a third unit represented by Chemical Formula 5, and an acid generator:

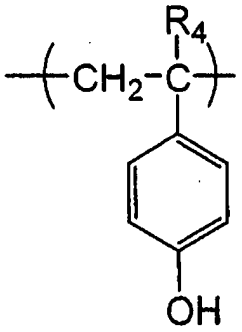
Chemical Formula 3:



Chemical Formula 4:



Chemical Formula 5:



wherein R_1, R_2 and R_4 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 is a protecting group released by an acid; and m is an integer of 0 through 5;

irradiating said resist film with exposing light of a wavelength shorter than a 180 nm band for pattern exposure; and

forming a resist pattern by developing said resist film after the pattern exposure.

Claim 11 (original): The pattern formation method of Claim 10, wherein said exposing light is a Xe_2 laser beam, a F_2 laser beam, a Kr_2 laser beam, an ArKr laser beam or an Ar_2 laser beam.

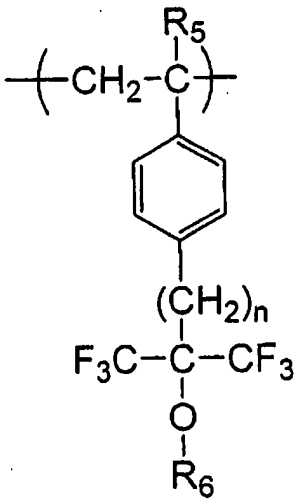
Claim 12 (original): The pattern formation method of Claim 10, wherein said exposing light is soft-X rays.

Claim 13 (original): The pattern formation method of Claim 10, wherein said exposing light is hard-X rays.

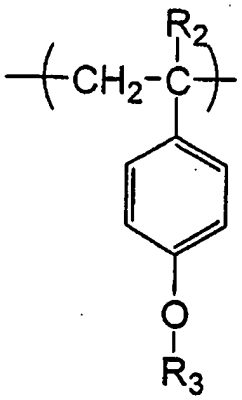
Claim 14 (original): A pattern formation method comprising the steps of:

forming a resist film by applying, on a substrate, a pattern formation material containing a polymer including a first unit represented by Chemical Formula 6 and a second unit represented by Chemical Formula 7, and an acid generator:

Chemical Formula 6:



Chemical Formula 7:



wherein R_2 and R_5 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 and R_6 are the

same or different, at least one of which is a protecting group released by an acid; and n is an integer of 0 through 5;

irradiating said resist film with exposing light of a wavelength shorter than a 180 nm band for pattern exposure; and

forming a resist pattern by developing said resist film after the pattern exposure.

Claim 15 (original): The pattern formation method of Claim 14, wherein said exposing light is a Xe_2 laser beam, a F_2 laser beam, a Kr_2 laser beam, an ArKr laser beam or an Ar_2 laser beam.

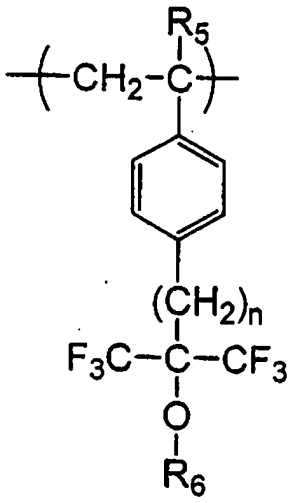
Claim 16 (original): The pattern formation method of Claim 14, wherein said exposing light is soft-X rays.

Claim 17 (original): The pattern formation method of Claim 14, wherein said exposing light is hard-X rays.

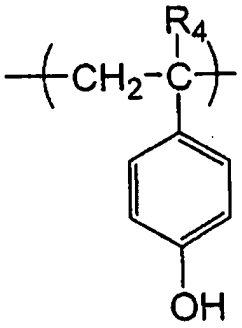
Claim 18 (original): A pattern formation method comprising the steps of:

forming a resist film by applying, on a substrate, a pattern formation material containing a polymer including a first unit represented by Chemical Formula 8 and a second unit represented by Chemical Formula 9, and an acid generator:

Chemical Formula 8:



Chemical Formula 9:



wherein R_4 and R_5 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_6 is a protecting group released by an acid; and n is an integer of 0 through 5;

irradiating said resist film with exposing light of a wavelength shorter than a 180 nm band for pattern exposure; and

forming a resist pattern by developing said resist film after the pattern exposure.

Claim 19 (original): The pattern formation method of Claim 18, wherein said exposing light is a Xe_2 laser beam, a F_2 laser beam, a Kr_2 laser beam, an ArKr laser beam or an Ar_2 laser beam.

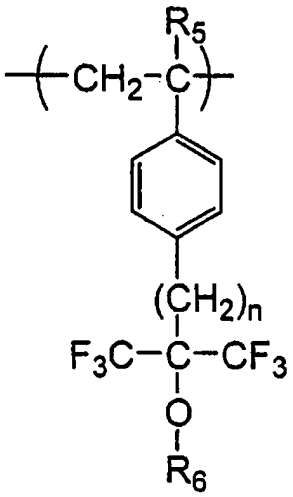
Claim 20 (original): The pattern formation method of Claim 18, wherein said exposing light is soft-X rays.

Claim 21 (original): The pattern formation method of Claim 18, wherein said exposing light is hard-X rays.

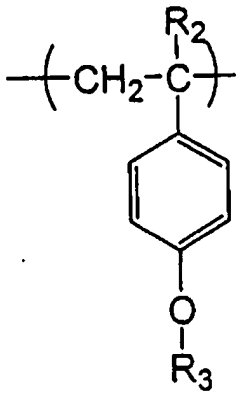
Claim 22 (original): A pattern formation method comprising the steps of:

forming a resist film by applying, on a substrate, a pattern formation material containing a polymer including a first unit represented by Chemical Formula 10, a second unit represented by Chemical Formula 11 and a third unit represented by Chemical Formula 12, and an acid generator:

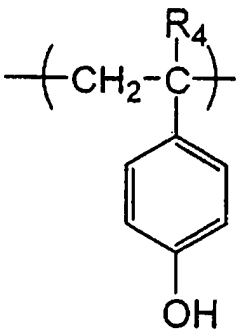
Chemical Formula 10:



Chemical Formula 11:



Chemical Formula 12:



wherein R_2, R_4 and R_5 are the same or different and selected from the group consisting of an alkyl group, a chlorine atom and an alkyl group including a fluorine atom; R_3 and R_6 are the same or different, at least one of which is a protecting group released by an acid; and n is an integer of 0 through 5;

irradiating said resist film with exposing light of a wavelength shorter than a 180 nm band for pattern exposure; and

forming a resist pattern by developing said resist film after the pattern exposure.

Claim 23 (original): The pattern formation method of Claim 22, wherein said exposing light is a Xe_2 laser beam, a F_2 laser beam, a Kr_2 laser beam, an ArKr laser beam or an Ar_2 laser beam.

Claim 24 (original): The pattern formation method of Claim 22, wherein said exposing light is soft-X rays.

Claim 25 (original): The pattern formation method of Claim 22, wherein said exposing light is hard-X rays.